

US DEPARTMENT OF COMMERCE
PATENT AND TRADEMARK OFFICE

APPLICANT: **LEONID B. CLEBOV**
 FOR: **SENSITIZATION OF PHOTO-THERMAL-REFRACTIVE GLASS TO VISIBLE RADIATION BY
TWO-STEP ILLUMINATION**

LIST OF ART CITED BY APPLICANTU.S. PATENT DOCUMENTS

EXAMINER	DOCUMENT NO.	NAME	DATE	CLASS	SUBCLASS
AA	4,541,694	Sullivan, et al.	09/17/1985	350	371
AB	5,098,803	Monroe, et al.	03/24/1992	430	1
AC	5,339,305	Curtis, et al.	08/16/1994	369	112

PATENT APPLICATION PUBLICATIONS

NONE

FOREIGN ART

FA	JP03-081718	Morinaka, et al.	04/08/1991
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OA (1979) A.P. Gararin, L.B. Glebov, O.M. Efimov, O.S. Efimova. Formation of color centers in sodium calcium silicate glasses with the nonlinear absorption of powerful UV radiation. Sov. J. Glass Phys. Chem. 5, Pages 337-340.

OB (08/1988) IBM Tech. Disc. Bull., Vol 31(3), pp. 18-23.

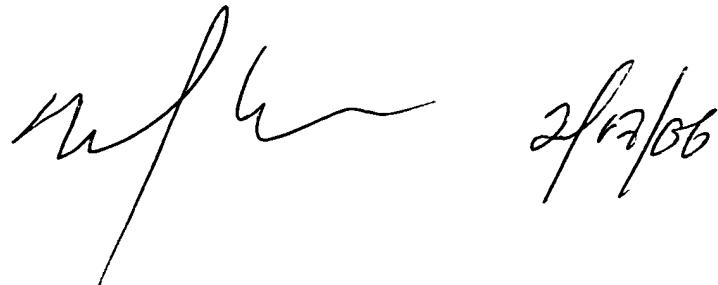
OC (1996) P. Hartharan. Optical Holography. Principles, techniques, and applications. Chapter 7: "Practical recording materials," 95-124. Cambridge University Press, Pages 95-97.

OD (1997) A.V. Dotsenko, L.B. Glebov, V.A. Tsekhomsky, Physics and Chemistry of Photochromic Glasses. CRC Press, Boca Raton, NY., Pages 9-11

OE (1999) Efimov, et al. "Laser-induced Damage of Photo-Thermo-Refractive Glasses for Optical-Holographic-Element Writing", SPIE Vol. 3578, pp. 564-575

OF (1999) O.M. Efimov, L.B. Glebov, S. Grantham, M. Richardson. Photoionization of silicate glasses exposed to IR femtosecond pulses. Journal of Non-Crystalline Solids, 253. 58-67.

OG (2002) O.M. Efimov, L.B. Glebov, H.P. Andre. Measurement of the induced refractive index in a photothermorefractive glass by a liquid-cell shearing interferometer. Appl. Optics, 41. 1864-1871



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US DEPARTMENT OF COMMERCE
PATENT AND TRADEMARK OFFICE

Applicant: EFIMOV, ET AL.
 FOR: HIGH EFFICIENCY BRAGG GRATINGS IN PHOTO-THERMO-REFRACTIVE GLASS

LIST OF ART CITED BY APPLICANT

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EXAMINER	DOCUMENT NO.	DATE	NAME	CLASS	SUBCLASS	FILING DATE
<u>Wan</u>	AA 3,640,604	02/06/72	YARNELL	350	162 SF	
<u>Wan</u>	AB 3,675,990	07/14/72	KOGELNIK, ET AL.	350	311	
<u>Wan</u>	AC 4,057,408	1/06/77	PIERSON, ET AL.	065	018	
<u>Wan</u>	AD 4,514,053	04/30/85	BORRELLI, ET AL.	350	162.2	
<u>Wan</u>	AE 4,567,104	01/26/86	WU	428	410	
<u>Wan</u>	AF 4,670,366	01/02/87	WU	430	13	
<u>Wan</u>	AG 4,894,303	01/16/90	WU	430	13	
<u>Wan</u>	AH 4,946,253	08/07/90	KOSTUCK	350	169	
<u>Wan</u>	AI 4,965,152	10/27/90	KEYS, ET AL.	430	01	
<u>Wan</u>	AJ 5,078,771	01/01/92	WU	65	30.11	
<u>Wan</u>	AK 5,196,282	03/23/93	KNOBBE	430	02	
<u>Wan</u>	AL 5,285,517	02/08/94	WU	385	142	
<u>Wan</u>	AM 5,486,934	01/23/96	HUANG	359	15	
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Wan OA1 *Optical Holography Principles, techniques and applications*, second edition, P. Hariharan, Cambridge University Press. pp 95-97

Wan OA2 *Full-Color Photosensitive Glass*, S. Donald Stookey, George H. Beall and Joseph E. Pierson, *Journal of Applied Physics*, Vol. 49, No. 10, October 1978, pp. 5114 - 5123.

Wan OA3 *Photolytic Technique for Producing Microlenses in Photosensitive Glass*, Borelli, Morse, Bellman and Morgan, *Applied Optics*, Vol. 24, No. 16, August 15, 1985, pp. 2520 - 2525.

Wan OA4 *Photothermal Refractive Effect in Silicate Glasses*, Borgman, Glebov, Nikonorov, Petrovskii, Savvin and Tsvetkov, *Sov. Phys. Dokl*, Vol. 34, No. 11, November 1989, pp. 1011 - 1013

US DEPARTMENT OF COMMERCE
PATENT AND TRADEMARK OFFICEGlebov
APPLICANT: EFIMOV, ET AL.

FOR: HIGH EFFICIENCY BRAGG GRATINGS IN PHOTO-THERMO-REFRACTIVE GLASS

10/665339

LIST OF ART CITED BY APPLICANT

Page 2 of 2

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✓ M OA5 *Polychromic glasses – A New Material for Recording Volume Phase Holograms*, Glebov, Nikonorov, Panyshova, Petrovskii, Savvin, Tunimanova and Tsekhomskiir, Sov. Phys. Dokl, Vol. 35, No. 10, October 1990, pp. 878 – 880.

M M OA6 *New Ways to Use Photosensitive Glasses for Recording Volume Phase Holograms*, Glebov, Nikonorov, Panyshova, Petrovskii, Savvin, Tunimanova, and Tsekhomskii, Opt. Spectrosc., Vol. 73, No. 2, August 1992, pp. 237 – 241.

M M OA7 *Photo-Induced Processes in Photo-Thermo-Refactive Glasses*, Glebov, Glebova, Richardson and Smirnov, XVI International Congress on Glass, San Francisco, CA, July 5 – 10, 1998.

M M OA8 *High-Efficiency Bragg Gratings in Photothermorefractive Glass*, Efimov, Glebov, Glebova, Richardson and Smirnov, Applied Optics, Vol. 38, No. 4, February 1999, pp. 619 – 627.

M M OA9 *Photo-Thermo-Refactive Glasses for High-Efficiency Bragg Gratings in UV, Visible, and IR Regions*, Efimov, Francois-Saint-Cyr, Glebov, Glebova, Richardson and Smirnov.

*W. H. H.**9/20/06
2/17/06*

Notice of References Cited	Application/Control No.	Applicant(s)/Patent Under R examination EFIMOV-EFAT. <i>Chabud</i>	
	09750,708 <i>10/665339</i>	Examiner	Art Unit
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*	Document Number Country Code-Number-Kind Code	Date MM-YYYY	Name	Classification
A	US-4541694	09-1985	Sullivan et al.	350/371
B	US-5099803	03-1992	Monroe et al.	430/1
C	US-5339305	08-1994	Curtis et al.	369/112
D	US-		<i>Chabud</i>	
E	US-		<i>Chabud</i>	
F	US-		<i>Chabud</i>	
G	US-		<i>Chabud</i>	
H	US-		<i>Chabud</i>	
I	US-		<i>Chabud</i>	
J	US-		<i>Chabud</i>	
K	US-		<i>Chabud</i>	
L	US-		<i>Chabud</i>	
M	US-		<i>Chabud</i>	

FOREIGN PATENT DOCUMENTS

*	Document Number Country Code-Number-Kind Code	Date MM-YYYY	Country	Name	Classification
N	03-081718	04-1991	Japan	Morinaka et al.	
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P					
Q					
R					
S					
T					

NON-PATENT DOCUMENTS

*	Include as applicable: Author, Title Date, Publisher, Edition or Volume, Pertinent Pages)		
U	IBM Tech. Disc. Bull., Vol 31(3) pp. 18-21 (08/1988)		
V	Efimov, et al. "Laser-induced Damage of Photo-Thermo-Refractive Glasses for Optical-Holographic-Element Writing", Proc. SPIE Vol. 3578, pp. 564-575 (1999)		
W			
X			

*A copy of this reference is not being furnished with this Office action. (See MPEP § 707.05(a).)
Dates in MM-YYYY format are publication dates. Classifications may be US or foreign.

MJ 2/17/06